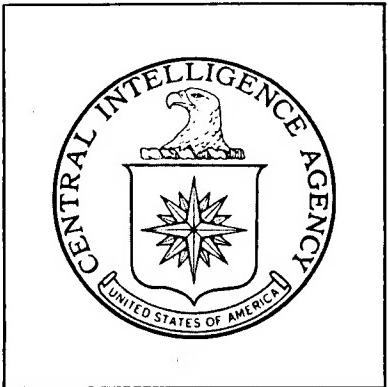


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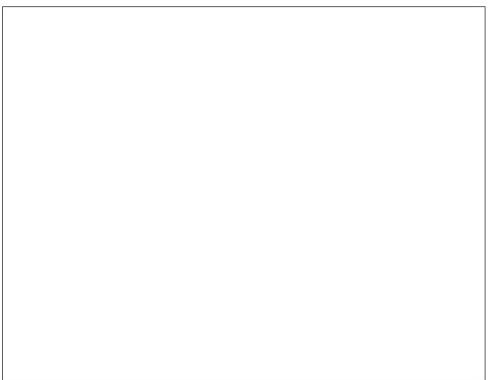
**Industrial Facilities  
(Non-Military)**

**DIRECTORATE OF  
INTELLIGENCE**

*Basic Imagery Interpretation Report*

**Shang-hai Chemical Plant Wu-ching**

**Shang-hai, China**



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**CENTRAL INTELLIGENCE AGENCY**  
**Directorate of Intelligence**  
**Imagery Analysis Service**

INSTALLATION OR ACTIVITY NAME		COUNTRY
Shang-hai Chemical Plant Wu-ching		CH
UTM COORDINATES 51RUE534392	GEOGRAPHIC COORDINATES 31-04-30N 121-27-50E	25X1
MAP REFERENCE 2nd RTS. USATC, Series 200. Sheet M0492-7HL. 3rd ed. May 68. Scale 1:200,000 (SECRET)		
25X1	LATEST IMAGERY USED	NEGATION DATE (If required) NA
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**ABSTRACT**

The primary function of Shang-hai Chemical Plant Wu-ching is the production of urea fertilizer, ammonium sulfate fertilizer, and methanol. Secondary products include sulfuric acid and ammonia.

The plant appears to have been built in three distinct phases. In March 1962, when the plant was first seen on good-quality photography, the first phase had been completed and facilities for the production of ammonium sulfate fertilizer were present. Between March 1962 and October 1965, facilities for the production of urea fertilizer were added. Between August 1966 and November 1968, facilities for the production of methanol were constructed. Only minor construction has occurred since that time.

The plant was first observed in operation in September 1963. It was in operation on all subsequent coverage through March 1968, and in December 1969, December 1970, and July 1971. It was not operating in November 1968, February and May 1969, and on the latest coverage in August 1971.

This report includes a photograph, a process flow chart, a line drawing of the plant, and a chronological summary of construction and operational status.

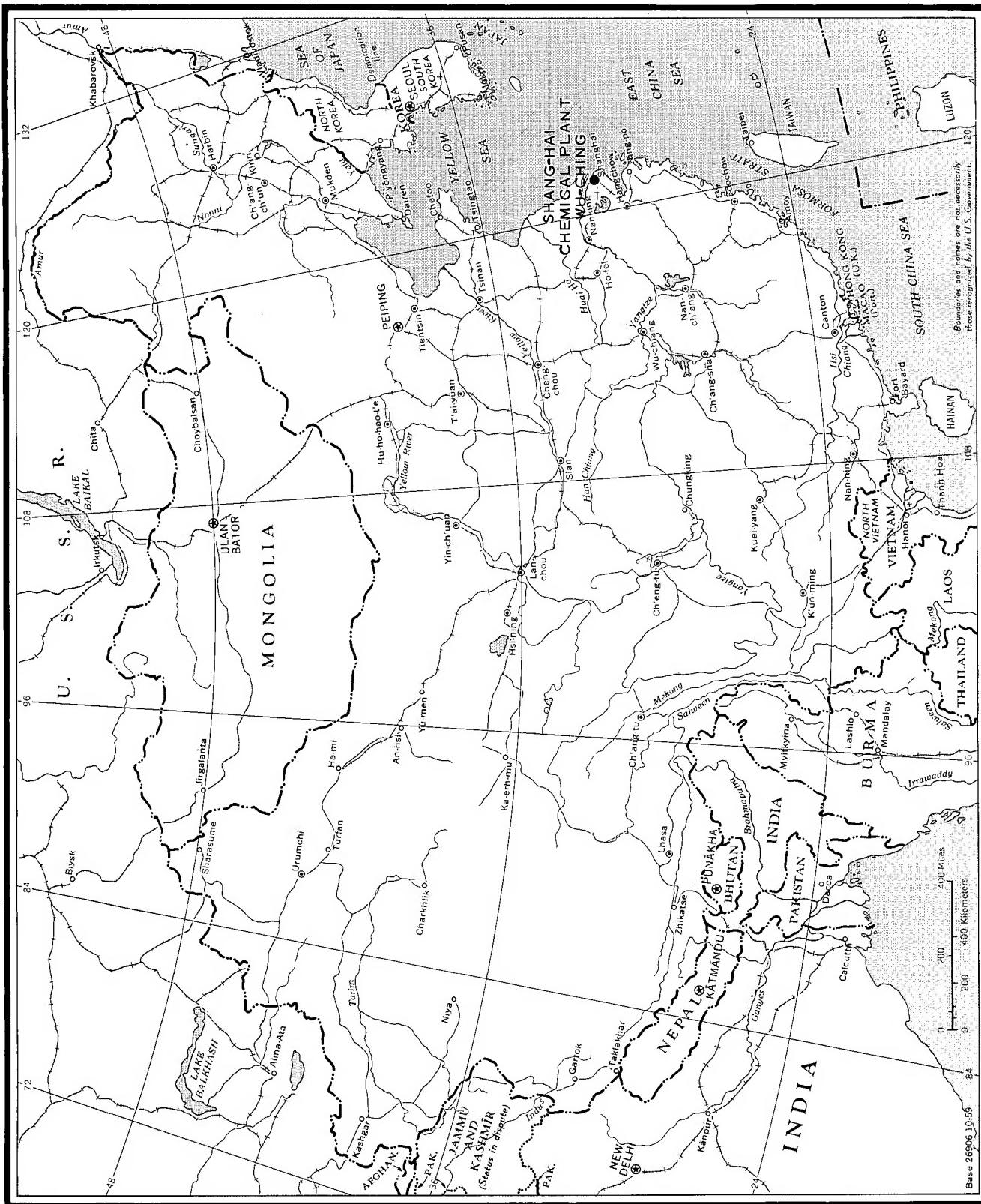
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**FIGURE 1: LOCATION MAP**

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## INTRODUCTION

Shang-hai Chemical Plant Wu-ching is located 10 nautical miles south of the center of Shang-hai (see Figure 1). It is situated in the Wu-ching industrial area, which also includes Shang-hai Coke Chemical Plant Wu-ching [redacted], Shang-hai Electro-chemical Plant (No BE), and Shang-hai Heat and Thermal Power Plant Wu-ching [redacted]. The heat and thermal power plant supplies electric power and steam to the entire industrial complex.

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## BASIC DESCRIPTION

Physical Features

The plant occupies about 70 acres in an area measuring approximately 2,170 by 1,400 feet (see Figures 2 and 3). The east side of the plant is adjacent to the Huang-pu River, and the other three sides are secured by a wall. The plant is served by the river, a good road network, and by a spur from the Shang-hai to Sung-chiang rail line.

Operational Functions

The primary function of the plant is the production of urea fertilizer, ammonium sulfate fertilizer, and methanol. Secondary products include sulfuric acid and ammonia.

Water gas is utilized as the source of hydrogen and nitrogen for the synthesis of ammonia and as the source of carbon dioxide for the production of urea and methanol. Pyrites are used as the source of sulfur dioxide for the production of sulfuric acid. The sulfur dioxide is oxidized to sulfur trioxide, which is then dissolved in water to form the acid. The process flow for the products is shown in Figure 4.

Construction Chronology

The plant appears to have been built in three phases. In December 1960, when it was first observed on photography, poor film resolution and small scale precluded detailed analysis of its early development. When it was next seen, in March 1962, the first phase of construction had been completed and facilities for the production of ammonium sulfate fertilizer were present. The second phase occurred between March 1962 and October 1965, when facilities for the production of urea fertilizer and water treatment were added. During the third phase, August 1966 to November 1968, facilities for the production of methanol were constructed. Additional water treatment facilities were constructed by December 1970. No construction has been observed since that time.

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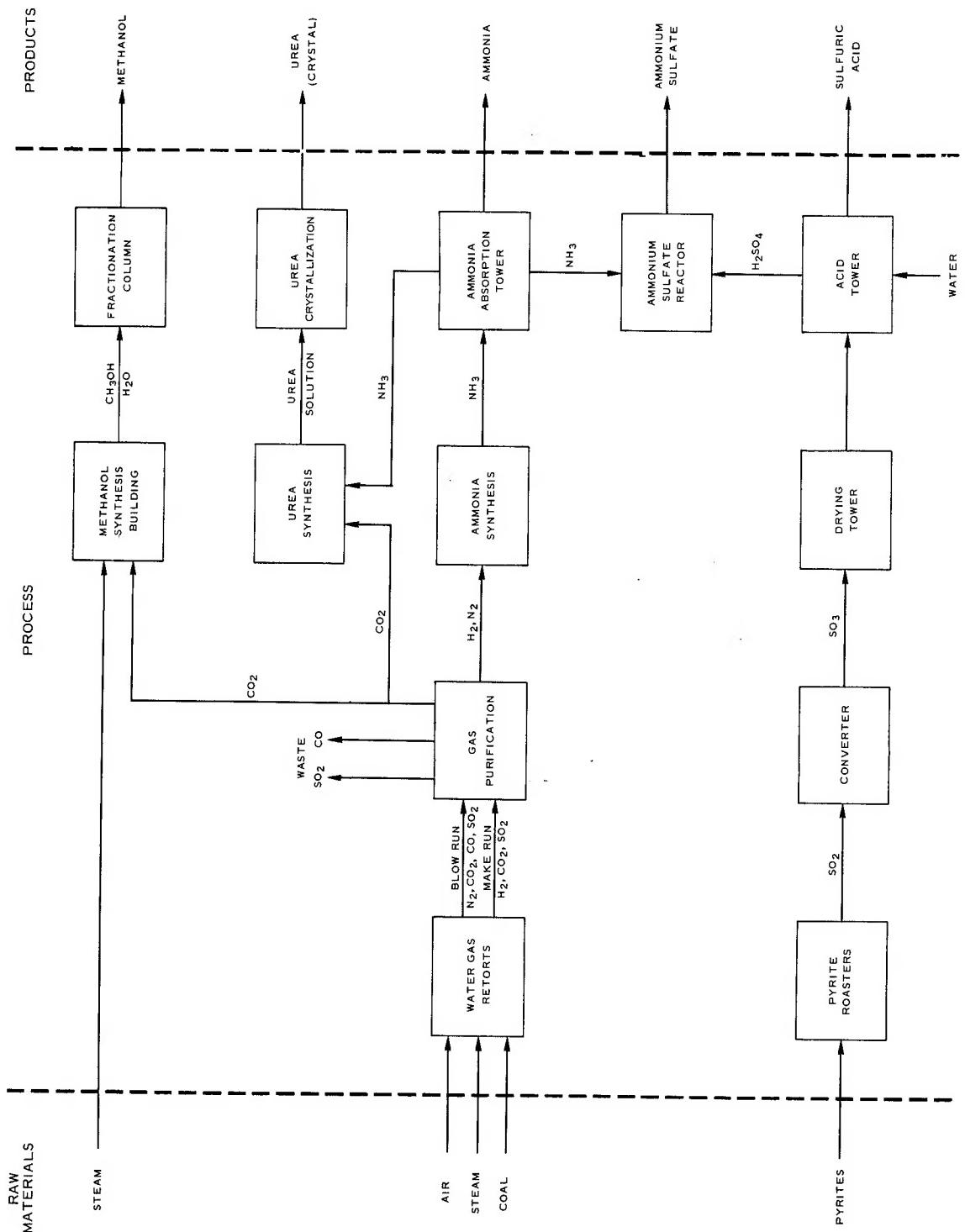


FIGURE 4. PROCESS FLOW AT SHANG-HAI CHEMICAL PLANT WU-CHING.

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Operational Status

The plant was first observed in operation in September 1963 as indicated by smoke from the ammonium sulfate reactor and from the waste gas dispersal tower in the sulfuric acid area. The plant was operating on all subsequent coverage through March 1968, and in December 1969, December 1970, and July 1971. It was not operating in November 1968, February and May 1969, and on the latest coverage in August 1971.

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Map

2nd RTS. US Air Target Chart, Series 200, Sheet M0492-7HL, 3rd edition,  
May 1968, Scale 1:200,000 (SECRET)

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Related Documents

DOD. [REDACTED] Work Time Required for Construction of Synthetic  
Methanol Shop at Shang-hai Wu-ching Chemical Plant, 30 April 1969  
(CONFIDENTIAL)

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DOD. [REDACTED] First Exclusively Communist Chinese Constructed  
Synthetic Methanol Plant, 5 July 1968 (CONFIDENTIAL)

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Requirement

COMIREX N07  
Support Number 422983

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